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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,026	02/19/2004	Ronald R. Walker	NEXT 8610U1	5610
1688	7590	04/07/2006	EXAMINER	
POLSTER, LIEDER, WOODRUFF & LUCCHESI 12412 POWERS COURT DRIVE SUITE 200 ST. LOUIS, MO 63131-3615			JOHNSON, STEPHEN	
			ART UNIT	PAPER NUMBER
			3641	
DATE MAILED: 04/07/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/782,026	WALKER ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Stephen M. Johnson	3641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-12 and 14-24 is/are pending in the application.
- 4a) Of the above claim(s) 1-5, 7-12 and 14-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-12, 14 and 20-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-5, 7-12 and 14-24 are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

1. Applicant's election with traverse of the group III invention (claims 9-12, 14, and 20-24) in the reply filed on 1/30/2006 is acknowledged. The traversal is on numerous grounds. Is argued that the various different components of the product have different physical properties. This is only partially accurate. The launch tube and barrel have similar properties. Further, although the enclosing means or sealing member used by applicant have different material properties, one of ordinary skill could make enclosing means or sealing member of the same material as the launch tube and barrel. Consequently, this device could be made having numerous components made of a single piece. It is argued that making these elements is not materially a materially different process. The examiner disagrees. Applicant's method claim specifically states "placing a reduced smoke pyrotechnic propellant within said enclosed base" and "enclosing said reduced smoke pyrotechnic propellant with said enclosed base"; etc.. These method steps would not be followed if the launch tube, barrel, and enclosing means were integrally formed around the pyrotechnic propellant and pyrotechnic composition. Such is considered to clearly be a materially different process. Applicant further argues that the barrel and launch tube could be made as an integral piece in his disclosure. However, this argument has no bearing on the fact that different method steps would be present if the barrel, launch tube, and enclosing means were integrally formed around the pyrotechnic devices.

It is further argued that the nitrocellulose propellants combust at a relatively low temperature and consequently lack sufficient heat of combustion to ignite a propelled component. It is further argued that if a surface of the pyrotechnic device is not ignited prior to launch the device will not function. While this is all accurate it doesn't address what is at issue. The examiner states that the device could operate absent the step of "propagating flame over at

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least one surface of the pyrotechnic composition". This does not mean that the pyrotechnic composition could not be ignited by some other method absent the step of "propagating flame over at least one surface". For other examples of how such a pyrotechnic composition could be activated (see items 12 and 22 of Wortley Jr. et al. or items 15 and 14 of Wortley Jr. et al. or items 42 and charge enclosed in 31 of Decker just to name a few). Further note that none of the these examples are directed to guns and that the examiner is not arguing the ignition is not necessary but rather that ignition is not required to be by "propagating flame over at least one surface of a pyrotechnic composition" as explicitly claimed in claim 1 at issue. It is further argued that if the pyrotechnic propellant is not delayed until after ignition of the pyrotechnic element, there will be insufficient thermal energy to ignite the pyrotechnic and launch the device. In response, please note Decker (col. 4, lines 10-28) where the propellant 30 is first ignited and the pyrotechnic element subsequently ignited.

The requirement is still deemed proper and is therefore made FINAL.

Claims 1-5, 7-8, and 15-19 are withdrawn from consideration as being directed to non-elected inventions. Claims 9-12, 14, and 20-24 read on the elected invention and an action on these claims follows.

2. The replacement sheets 1-2 filed on 10/03/2005 have been approved.
3. The term "reduced" in claims 9-12, 14, and 20-24 is a relative term which renders the claim indefinite. The term "reduced" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. One of ordinary skill is not apprised of what level of smoke is considered to be a normal or a none reduced level and as such cannot

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determine what level of smoke would be inclusive in the terminology “reduced smoke pyrotechnic propellant”.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 9-12 and 20-23 are rejected under 35 U.S.C. 102(b) as being anticipated by

Wortley Jr. et al. (707).

Wortley Jr. et al. (707) disclose a pyrotechnic display device comprising:

- |  |                         |
|--|-------------------------|
| a) an enclosed base defining an open end;                              | 21, 27                  |
| b) a launch tube;  | 17, 18                  |
| c) an open discharge end;  | see fig. 1              |
| d) a smokeless pyrotechnic propellant;                                 | 12; col. 2, lines 48-49 |
| e) a sealing member or non-combustable separation member;              | 24, 25                  |
| f) at least one pyrotechnic composition;                               | 14                      |
| g) at least one ignition source proximate the pyro composition;        | 15 (upper)              |
| h) an axial bore;  | contains 45             |
| i) a combustion delay component to obstruct the axial bore;            | 15 (lower)              |
| j) a closure member between the open end and the pyro composition; and | 32                      |
| k) a second ignition source.   | 22                      |

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6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wortley Jr. et al. (707) in view of Gonzales (224).

Wortley Jr. et al. applies as previously recited. However, undisclosed is a pyrotechnic propellant that is nitrocellulose. Gonzales (224) teaches a pyrotechnic propellant that is nitrocellulose (col. 1, lines 66-68). Applicant is substituting one pyrotechnic propellant composition for another in an analogous art setting as explicitly encouraged by both the primary and secondary references (see col. 2, lines 48-49 of Wortley Jr. and col. 1, lines 66-68 of Gonzales). It would have been obvious to a person of ordinary skill in this art at the time of the invention to apply the teachings of Gonzales to the Wortley Jr. et al. pyrotechnic display device and have a pyrotechnic display device with a different type of pyrotechnic propellant.

8. Claim 24 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

9. Applicant's arguments with respect to claims 9-12, 14, and 20-23 have been considered but are moot in view of the new ground(s) of rejection.

10. This application contains claims 1-5, 7-8, and 15-19 drawn to an invention nonelected with traverse in the paper filed on 1/30/2006. A complete reply to the final rejection must

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include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

**12** Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. Johnson whose telephone number is 571-272-6877 and whose e-mail address is ([Stephen.Johnson@uspto.gov](mailto:Stephen.Johnson@uspto.gov)). The examiner can normally be reached on Tuesday through Friday.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 571-272-6873. The Central FAX phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 800-786-9199.

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**STEPHEN M. JOHNSON**  
**PRIMARY EXAMINER**

Stephen M. Johnson  
Primary Examiner  
Art Unit 3641

SMJ

March 31, 2006